



SFO Consumer Confidence Report 2014

CONSERVATION ALERT:

Following another historically dry winter, we continue to ask all customers to voluntarily reduce water use by 10%. Also in accord with new State of California emergency water restrictions, reductions in outdoor irrigation of ornamental landscape and turf are still in place.

The San Francisco Public Utilities Commission (SFPUC) supplied an average of 205 MGD water via its Regional Water System to serve 2.6 million people in the Bay Area in 2014.

Our Drinking Water Sources and Treatment

The sources of drinking water (both tap water and bottled water) include rivers, lakes, oceans, streams, ponds, reservoirs, springs, and wells.

Supplied by the San Francisco Regional Water System (SFRWS), our major water source originates from spring snowmelt flowing down the Tuolumne River to storage in Hetch Hetchy Reservoir. The pristine, well protected Sierra water source is exempt from filtration requirements by the United States Environmental Protection Agency (USEPA) and State Water Resources Control Board's Division of Drinking Water (SWRCB). Water treatments provided by the SFRWS, including disinfection by ultraviolet light and chlorine, corrosion control by adjustment of the water pH value, fluoridation for dental health protection, and chloramination for maintaining disinfectant residual and minimizing disinfection byproduct formation, are in place to meet the drinking water regulatory requirements.

The Hetch Hetchy water is supplemented with surface water from two local watersheds. Rainfall and runoff from the 35,000-acre Alameda Watershed in Alameda and Santa Clara counties are collected in the Calaveras and

San Antonio reservoirs for filtration and disinfection at the Sunol Valley Water Treatment Plant. Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in the Crystal Springs, San Andreas, and Pilarcitos reservoirs, and are filtered and disinfected at the Harry Tracy Water Treatment Plant.

As in the past, the Hetch Hetchy Watershed provided the majority of our total water supply, with the remainder contributed by the two local watersheds in 2014.

Protecting Our Watersheds

The SFPUC's annual Hetch Hetchy Watershed Sanitary Survey evaluates the sanitary conditions, water quality, potential contamination sources, and the results of watershed management activities with partner agencies including the National Park Service and US Forest Service.

The SFPUC also conducts sanitary surveys every five years to detect and track sanitary concerns for the local watersheds and the approved standby water sources in Early Intake Watershed, which includes Cherry Lake and Lake Eleanor. The latest 5-year surveys were completed in 2011 for the period of 2006-2010. These surveys identified wildlife, stock, and human activities as potential contamination sources. The reports are available for review at the San Francisco District office of SWRCB (510) 620-3474.

Water Quality

The SFPUC's Water Quality Division (WQD) regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure the water delivered to you meets or exceeds federal and state drinking water standards. In 2014, WQD staff conducted more than 52,000 drinking water tests in the transmission and distribution systems. This is in addition to the extensive treatment process control monitoring performed by the SFPUC's certified operators and online instruments.

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Such substances are called contaminants.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, the USEPA and SWRCB prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. SWRCB regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Contaminants and Regulations

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production, and mining activities.

More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (800) 426-4791.

Reducing Lead from Plumbing Fixtures

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. There are no known lead service lines in the SFRWS. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. It is possible that lead levels at your home may be higher than at others because of plumbing materials used in your property.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are typically more vulnerable to lead in drinking water than the general population. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead levels in your water, you may wish to have your water tested. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA's Safe Drinking Water Hotline (800) 426-4791, or at www.epa.gov/safewater/lead.

Special Health Needs

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (800) 426-4791 or at www.epa.gov/safewater.

Wholesale Agency's Water Quality Data for Year 2014

The SFPUC conducted monitoring as required by the USEPA's third Unregulated Contaminant Monitoring Rule (UCMR3) in 2013. The UCMR3 monitoring results were included in the 2013 Annual Water Quality Report, which is accessible at <http://sfwater.org/quality/2013>.

The table below lists all 2014 detected drinking water contaminants and the information about their typical sources. Contaminants below detection limits for reporting are not shown, in accord with regulatory guidance. The SFRWS received from the SWRCB a monitoring waiver for some contaminants such that their monitoring frequencies are less than annual.

Detected Contaminants	Unit	MCL	PHG or (MCLG)	Range or Level Found	Average or [Max]	Major Sources in Drinking Water		
Turbidity								
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.2 - 0.6 ⁽²⁾	[2.8]	Soil runoff		
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU -	1 ⁽³⁾ Min 95% of samples ≤ 0.3 NTU ⁽³⁾	N/A N/A	- 97% - 100%	[0.98] -	Soil runoff		
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU -	1 ⁽³⁾ Min 95% of samples ≤ 0.3 NTU ⁽³⁾	N/A N/A	- 100%	[0.07] -	Soil runoff		
Disinfection Byproducts and Precursor								
Total Trihalomethanes	ppb	80	N/A	<0.5-46.9	[51.7] ⁽⁴⁾	Byproduct of drinking water disinfection		
Haloacetic Acids	ppb	60	N/A	<2-40	[35.6] ⁽⁴⁾	Byproduct of drinking water disinfection		
Total Organic Carbon ⁽⁵⁾	ppm	TT	N/A	1.3 - 2.8	1.9	Various natural and man-made sources		
Microbiological								
Total Coliform	%	"NoP ≤ 5.0% of monthly samples"	(0)	0-1.54	0.36	Naturally present in the environment		
Giardia lamblia	cyst/L	TT	(0)	<0.01 - 0.04	<0.01	Naturally present in the environment		
Inorganics								
Fluoride (source water) ⁽⁶⁾	ppm	2.0	1	ND - 0.8	0.4 ⁽⁷⁾	Erosion of natural deposits; water additive to promote strong teeth		
Chloramine (as chlorine)	ppm	MRDL = 4.0	MRDLG = 4	1.76-2.97	2.68 ⁽⁸⁾	Drinking water disinfectant added for treatment		
Constituents with Secondary Standards	Unit	SMCL	PHG	Range	Average	Major Sources of Contaminant		
Chloride	ppm	500	N/A	<3 - 15	9	Runoff/leaching from natural deposits		
Odor Threshold	TON	3	N/A	ND - 1	ND	Naturally-occurring organic materials		
Specific Conductance	µS/cm	1600	N/A	32-222	151	Substances that form ions when in water		
Sulfate	ppm	500	N/A	0.9 - 32	17	Runoff/leaching from natural deposits		
Total Dissolved Solids	ppm	1000	B/A	32 - 120	81	Runoff/leaching from natural deposits		
Turbidity	NTU	5	N/A	0.1 - 0.2	00.1	Soil runoff		
Lead and Copper	Unit	AL	PHG	Range	90 th Percentile	Major Sources in Drinking Water		
Copper ⁽⁹⁾	ppb	1300	300	10.7 - 184.6	71.5	Internal corrosion of household water plumbing systems		
Lead ⁽¹⁰⁾	ppb	15	0.2	<1 - 4.1	2.2	Internal corrosion of household water plumbing systems		
Other Water Quality Parameters	Unit	ORL	Range	Average	Key:			
Alkalinity (as CaCO ₃)	ppm	N/A	8 - 94	37	< / ≤	less than / less than or equal to	NoP	Number of Coliform-Positive Sample
Bromide ⁽¹¹⁾	ppb	N/A	ND - 27	5	AL	Action Level	NTU	Nephelometric Turbidity Unit
Calcium (as Ca)	ppm	N/A	3 - 20	11	Max	Maximum	ORL	Other Regulatory Level
Chlorate ⁽¹²⁾	ppb	800 (NL)	34 - 740	314	Min	Minimum	ppb	part per billion
Hardness (as CaCO ₃)	ppm	N/A	7 - 77	46	N/A	Not Available	ppm	part per million
Magnesium	ppm	N/A	<0.2 - 6.4	3.9	ND	Non-Detect	TON	Threshold Odor Number
pH	-	N/A	6.9 - 10.2	9.3	NL	Notification Level	µS/cm	microSiemens/centimeter
Potassium	ppm	N/A	0.2 - 1	0.6				
Silica	ppm	N/A	2 - 5	4				
Sodium	ppm	N/A	2.4 - 16	10				

Footnotes

- (1) All results met State and Federal drinking water health standards.
- (2) These are monthly average turbidity values measured every 4 hours daily.
- (3) There is no turbidity MCL for filtered water. The limits are based on the TT requirements for filtration systems.
- (4) This is highest locational running annual average value (if your system has 4 quarters of locational DBP data obtained under Stage 2 DBPR monitoring).
- (5) Total organic carbon is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SVWTP only.
- (6) The SWRCB specifies the fluoride level in the treated water be maintained within a range of 0.8 ppm - 1.5 ppm. In 2014, the range and average of the fluoride levels were 0.6 ppm - 1.2 ppm and 0.9 ppm, respectively.
- (7) The natural fluoride level in the Hetch Hetchy supply was ND. Elevated fluoride levels in the SVWTP and HTWTP raw water are attributed to the transfer of fluoridated Hetch Hetchy water into the reservoirs.
- (8) This is the highest running annual average value.
- (9) The most recent Lead and Copper Rule monitoring was in 2013. 0 of 34 site samples collected at consumer taps had copper concentrations above the AL.
- (10) The most recent Lead and Copper Rule monitoring was in 2013. 0 of 34 site samples collected at consumer taps had lead concentrations above the AL.
- (11) Bromide was detected in HTWTP effluent only. If you do not receive HTWTP water in 2014, you may exclude this contaminant from this table.
- (12) The detected chlorate in the treated water is a degradation product of sodium hypochlorite used by the SFPUC for water disinfection.

Note: Additional water quality data may be obtained by Design and Construction at (650) 821-7843.

Fluoridation and Dental Fluorosis

Mandated by State law, water fluoridation is a widely accepted practice proven to be safe and effective for preventing and controlling tooth decay. The SFPUC water is fluoridated at 0.9 milligram per liter. Infants fed formula mixed with water containing fluoride at this level may have an increased chance of developing tiny white lines or streaks in their teeth. These marks are referred to as mild to very mild fluorosis, and are often only visible under a microscope. Even in cases where the marks are visible, they do not pose any health risk. CDC considers it safe to use optimally fluoridated water for preparing infant formula. To lessen this chance of dental fluorosis, you may choose to use low-fluoride bottled water to prepare infant formula. Nevertheless, children may still develop dental fluorosis due to fluoride intake from other sources such as food, toothpaste and dental products. Contact your health provider or SWRCB if you have concerns about dental fluorosis. For additional information visit the SWRCB website www.swrcb.ca.gov/ and search for fluoride, or the CDC website www.cdc.gov/fluoridation.

SFPUC's Regional Groundwater Project Will Kick Off Construction in 2015

The SFPUC's Regional Groundwater Storage and Recovery (GSR) Project is a partnership with the cities of Daly City and San Bruno and the California Water Service Company that can provide 7.2 million gallons of water per day to protect against future droughts and earthquakes. Construction is scheduled to begin in 2015 and be completed in 2018. The GSR project balances the use of both groundwater and surface water in the South Westside Groundwater Basin (northern San Mateo County). During years of normal or

heavy rainfall, the project will provide additional surface water to the partner agencies in order to reduce the amount of their groundwater pumping.

Over time, the reduced pumping will create a groundwater savings account of up to 60,500 acre-feet of water or 20 billion gallons — a volume equivalent to that of the SFPUC's Crystal Springs Reservoir. In dry years, when less surface water is available, the stored water would be pumped from the new groundwater wells and benefit the 2.6 million people in the Bay Area who rely on the SFRWS.

Treatment Plant Improvements

The Harry Tracy Water Treatment Plant Long-Term Improvements Project is now complete. The \$280 million project includes significant upgrades to the ozonation system (an effective oxygen-based method for destroying bacteria, viruses and odors), construction of five new filters and a new 11-million-gallon treated water reservoir. The overall improvements in performance will increase the plant's capacity and reliability for treating drinking water for San Francisco and San Mateo County. It also ensures that the plant can reliably produce 140 MGD of water within 24 hours of a major earthquake.

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